ABSTRACT OF THE DISCLOSURE

Modulation codes for code division multiple access (CDMA) cellular communications systems that are mutually orthogonal may be generated as a sequence of Walsh codes. A method of assigning Walsh codes includes the steps of (404) receiving as input a status vector (200) for a Walsh code system of length 2^n and a selected Walsh code length $j = 2^{n-k}$; (406)-(418) creating a new status vector for a selected Walsh code length of j from the status vector; (416) creating a search mask for the selected Walsh code length j; (418) creating a search sequence for the selected Walsh code length j; and (434)-(442) searching the search sequence for the next available Walsh code. The status vector is updated (500) to track the assignment and release of each Walsh code of each Walsh code length in the Walsh code system.